STS CONSULTANTS

STS Consultants, Ltd.
750 Corporate Woods Parkway
Vernon Hills, Illinois 60061-3153

voice 847-279-2500
fax 847-279-2510
web www.stsconsultants.com

September 20, 2002

Mr. David Larson
Pullman Bank
1000 E. 111th Street
Chicago, Illinois 60628

RE: Results of Radiological Investigation, 2.3-Acre Property, Southwest Corner of New Street and Illinois Street, Chicago, Illinois - STS Consultants Project No. 1-24418-YE

Dear Mr. Larson:

As you know, Pullman Bank retained STS Consultants, Ltd. (STS) to perform a radiological investigation at a 2.3-acre parking lot located to the southwest of New Street and Illinois Street in Chicago, Illinois (the Site). The results of that investigation identified evidence of radiological impacts at the Site. The levels of radioactivity measured would, in our opinion, be of concern if brought to the attention of the U. S. Environmental Protection Agency (USEPA). Further, it is our opinion that USEPA may recommend further exploration, removal, and/or issue a deed restriction in response to these findings.

BACKGROUND INFORMATION

Historic manufacturing of gas lantern mantles in the Site vicinity by Lindsay Light used thorium, a radioactive element, in the manufacturing process. Previous radiation screening has documented residual radioactivity in properties in the general vicinity. The purpose of this investigation was to assess the presence of elevated levels of radioactivity in the subsurface at the Site. The scope of work for the radiological investigation was described in STS's proposal dated August 9, 2002.

It should be noted that the USEPA has required removal of materials above a specified cleanup level when elevated radioactivity has been documented on properties in the area. Further, our experience is that where USEPA has been asked to sign-off on the condition of a given site as clean, relative to radioactivity, a preliminary investigation (such as that described herein) is not sufficient to eliminate all concerns from the USEPA. We anticipate that the USEPA may request additional radiation surveying during the course of future construction excavation at the Site. Such radiation monitoring includes pre-construction probing for caisson obstructions; excavations for footings, grade beams, caisson caps, utilities; basement excavations; or drilling for caisson construction, among others.

SCOPE OF WORK

Prior to initiating the subsurface exploration, STS coordinated with the parking lot operator to restrict use of portions of the Site during the two-day exploration effort. STS also requested clearance for utilities through DIGGER, and obtained Dig No. 223510860.

The exploration consisted of the installation of 31 borings over the Site. The proposal called for 30 borings; however, one additional boring was drilled and logged to further explore elevated Gamma readings near borings B-18 and B-19. The Site was subdivided into three units: the northern parcel, north of the former Ogden Slip; the former Ogden Slip where it crossed the Site before it was filled; and the southern parcel, south of the former Ogden slip. The former Lindsay Light operations were located immediately north of Illinois Street from the Site. The close proximity to the northern parcel recommended a more thorough exploration of that portion of the Site. As such, 20 of the 30 borings were placed on the north parcel at the approximate locations shown on Figure 1. It should be noted that during subsurface exploration the parking lot was in use and apparent gaps in the northern parcel reflect the presence of vehicles, limiting access. Under such circumstance, the soil borings were offset to nearby accessible locations.

Borings drilled in the northern and southern parcels were advanced through the fill soil and a minimum of 1 foot into the natural sand soil, to a depth on the order of 8 to 10 feet deep. Fill material for Ogden Slip was brought to the property in the 1980s when the slip was filled and, therefore, was assumed to not contain Lindsay Light material. Borings drilled in the central portion of the Site, over the former Ogden Slip, were drilled as shallow borings to assess whether radioactive fill material may have been spread over this area during grading. These borings were limited to 5 feet deep.

The borings were cased with 3-inch diameter PVC casing to prevent the borehole from collapsing during the logging. The radioactive logging was done using a Ludlum 2221 rate meter-scaler and a 2 X 2 NaI gamma detector. The NaI detector was fitted with a lead shield cap at the bottom to minimize "shine" radiation from possible elevated radioactive materials at depths below the probe. Logging was done in 6-inch increments for the entire boring depth. Gamma measurements were made in 30-second counts for each interval. The measurements were compared to the counts representative of the cleanup level established by USEPA. That cleanup level is 7.1 picocuries per gram (pCi/g) total radium (Ra-226 + Ra-228). The gamma count indicative of an exceedance of the 7.1 pCi/g threshold for the equipment used is15,894 counts in 30 seconds.

All drill cuttings were screened for elevated radioactivity. Cuttings were minimal as the borings were advanced by rotating the augers into the ground and in effect forcing the cuttings into the sidewalls of the boring. The minimal amount of cuttings generated at each boring was placed back in the hole upon completion prior to backfilling the boring with bentonite grout.

FINDINGS

A total of 549 gamma readings were taken in the 31 boreholes. Gamma readings for the borings indicate what appear to be the typical background range of readings, on the order of 2,000 to 3,000 counts (note all referenced counts are for 30 seconds). Borings at gamma counts on the order of twice background, above approximately 6,000 counts, suggest some radiological anomalies. Readings above the threshold value of 15,894 counts indicate levels of radionuclides that require removal to meet the USEPA cleanup criteria.

The readings for each boring are presented in Attachment 1, Downhole Field Gamma Logs. In addition, a Gamma Reading Frequency Table is also included as Attachment 2. Several of the borings along the northeast and northwest margins and across the center of the Site showed readings that were elevated above the background. The USEPA considers readings more than twice background as suggestive of the presence of radiological impacts in close proximity to the borings. One boring, B-27, showed gamma readings that exceeded the gamma count for evidence of soil above the 7.1 pCi/g cleanup threshold. This boring had a maximum gamma count of 52,118 at a depth of 4 to 4.5 feet. The 6-inch interval above had a reading of 26,114 counts, and the interval from 4.5 to 5 feet had a reading of 31,228 counts. This boring was in the central section of the Site and as such was only drilled to 5 feet.

Although only one boring, B-27, showed evidence of gamma counts exceeding the cleanup criteria, the presence of a number of borings with readings at levels on the order of twice background or more suggests other areas may also contain materials requiring removal. These borings and the maximum readings and depths of the maximum gamma count are shown in Table 1 below.

Table 1
Borings exceeding 6000 counts (30 sec.)

Boring No.	Maximum Gamma	Depth (ft)
B-1	6582	7
B-2	7750	4
B-3	6731	4.5

B-5	6418	4
B-6	6837	4.5
B-7	7382	2
B-8	7056	1.5
B-11	6379	2.5
B-12	6351	3.5
B-15	7529	7.5
B-17	6043	6
B-18	9359	6.5
B-19	9189	3.5
B-27	52119	4.5
B-29	8619	4.5
B-30	9029	5
B-31	9531	3.5

The north end of the Site showed 14 boring locations with elevated levels of radioactivity. It is possible the material used to fill this area was homogenized in the course of soil handling and may be at lower concentrations due to mixing and dilution. These borings in the north end of the Site show gamma values declining at the bottom, where they penetrated natural soils. The potentially impacted soil appears limited to the fill profile.

The area with the highest reading includes the central part of the Site which appears to be part of the former Ogden Slip, and was filled recently, in the 1980s. STS has not researched the source of the fill nor the party responsible for filling the slip. It is possible that radioactive fill material from surrounding property development was used to fill the Ogden Slip during the 1980s and is the cause of the specific "hot" B-27 boring. The limited number of borings and their shallow depth constrains any interpretation on the distribution and quantity of impacts material within the former slip.

The south end of the Site and much of the southern margin of the central section of the Site has maximum gamma counts below 6000 counts and several borings with maximum counts below 5000. This suggests that part of the Site has no evidence of radiological impacts at the locations drilled.

RECOMMENDATIONS

The depth of cover and pavement cap on the Site provides an effective shielding for the identified impacted soil. No significant risk due to the presence of the impacted soil exists as long as the Site remains covered. It is possible that an engineered barrier consisting of pavement or a building could be proposed to encapsulate the impacted soil without USEPA requiring removal. This option, however, would likely involve a deed restriction. Such a deed restriction could impact the marketability of the Site.

The USEPA has requested excavations in the Streeterville neighborhood be monitored for elevated radioactivity even in the absence of identified impacts. Given the identified elevated radioactivity, monitoring during construction is likely to be required at the Site. The monitoring is conducted with three main objectives. First, the construction workers who would be in intimate contact with the soil can be protected from contact with and tracking of the soil. Second, the public can be protected from possible dust or erosion and washing the soil to locations where the public could come into contact with the soil. Third, the USEPA monitoring of excavations will prevent excavated impacted soil from being transported and deposited at another site.

The unknown quantity and extent of impacted material limits our ability to estimate potential costs to respond to the identified contamination. However, our experience on several vicinity properties indicates costs can exceed several million dollars for excavation, transportation, disposal, engineering, monitoring

and testing, and documentation. Significantly more exploration would be required to refine this cost estimate.

It is recommended that the information from this investigation be provided to USEPA so that they can consider what possible monitoring efforts may be requested in the future for the Site.

The findings reported herein are limited to the locations and depths explored. Conditions may vary between boring locations. No warranty is implied or expressed with regard to the environmental conditions at the Site, nor with regard to USEPA's response to the findings of this exploration.

We appreciate the opportunity to be of service to Pullman Bank and you clients. Please contact us with any questions you may have with regard to this report.

Regards.

STS CONSULTANTS, LTD.

Eric Reuscher FOR
Assistant Project Scientist

Richard G. Berggreen, C.P.G.
Principal Geologist

Attachments: 1. Downhole Field Gamma Logs
2. Gamma Reading Frequency

Attachment 1
Downhole Field Gamma Logs
B-1 thru B-31
(Counts per 30 Seconds)
September 10, 2002

Depth (ft)	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8
0.5	2735	2257	1474	2397	4697	2643	2864	3590
1	3960	4575	1844	4307	5746	5818	5889	6576
1.5	4038	5583	2980	3517	3937	7425	7114	7057
2	4322	5667	5139	3500	4470	7523	7382	6661
2.5	4484	6649	5921	4520	5177	5835	6051	6292
3	4321	7425	6105	5350	6157	6167	4430	5497
3.5	4246	7652	6693	4676	6179	6659	4186	4746
4	3999	7750	6578	4228	6418	6677	4687	4413
4.5	4308	7446	6737	4178	6131	6837	4184	4767
5	4647	7364	6536	4302	5760	6647	3603	5995
5.5	5440	6704	5873	4612	5887	6090	3356	6055
6	6118	6222	5810	4839	5992	5775	3685	5705
6.5	6631	6153	5730	5008	5921	4634	3631	5115
7	6582	6405	5196	4908	5465	3597	3473	5142
7.5	5394	6398	4767	4643	4439	3477	3549	5654
8	4650	5970	4454	3880	3067	3006	3842	5888
8.5	2354	3944	3366	3657	2904	2429	3145	4746
9	2216	2908	3219	3749	2599	2574	2682	3764
9.5	2352	2323	NA	3869	2084	1682	2296	2886
10	2452	2475	NA	NA	1778	1437	2297	2699
10.5	NA	NA	NA	NA	1810	NA	NA	NA
11	NA	NA	NA	NA	1796	NA	NA	NA

NA = Not Applicable

Attachment 1
Downhole Field Gamma Logs
B-1 thru B-31
(Counts per 30 Seconds)
September 10, 2002

B-9	B-10	B-11	B-12	B-13	B-14	B-15	B-16	B-17
1672	2672	2627	2348	1480	3409	1501	1713	2184
3165	2309	5017	5094	1302	4226	2001	2713	3286
4840	1652	5819	6262	1157	5605	2981	3813	3786
4418	1358	6255	4411	1054	5772	3130	4918	3883
3038	1283	6379	5156	1012	4979	2762	5852	4084
3912	1289	6100	5975	1048	4123	2828	5362	3631
4275	1454	6192	6361	1030	3189	3853	4209	3581
3686	1406	6257	6130	1264	3854	6056	4221	3650
4946	1415	6197	5798	1657	3882	5651	4487	4351
4957	1855	6208	5803	2106	3910	3589	4733	5272
4951	2611	6070	5247	2789	4409	3472	4708	5861
3283	3658	6010	4890	3761	3671	4501	5483	6043
2758	3380	5453	5086	3518	3305	6195	4593	5384
2324	3446	4027	4393	3044	3714	7267	3612	3748
2173	4014	4466	2674	2897	3830	7589	3422	2786
2181	4648	4162	2266	NA	3336	7555	3336	NA
2777	4365	3155	2069	NA	3752	7515	3377	NA
3176	4468	2185	2039	NA	3905	7064	3376	NA
3521	5058	1742	1919	NA	3882	6266	3691	NA
4158	5287	NA	2025	NA	4224	5815	NA	NA
NA	NA	NA	NA	NA	4725	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA

NA = Not Applicable

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Attachment 1
Downhole Field Gamma Logs
B-1 thru B-31
(Counts per 30 Seconds)
September 10, 2002

B-18	B-19	B-20	B-21	B-22	B-23	B-24	B-25	B-26
1885	1990	1933	2525	2377	3114	4146	4290	2574
3677	2941	2990	4424	3329	3425	4228	4298	3206
4446	3181	4179	4968	4609	2769	2300	3353	3263
4028	3226	4585	4987	5033	2811	1899	2066	3040
4436	4314	5167	5183	4780	4667	2325	2082	3099
4964	6993	5536	4640	4100	4844	2457	2315	3604
5395	9199	5245	4013	3644	4400	2494	2519	4186
4863	6407	4863	2733	3436	4160	2492	2370	4478
5158	4557	4348	2270	3080	3578	2349	2261	4530
6514	4017	4289	2135	2754	2803	2303	2232	5583
7046	3720	4340	2226	2436	2680	2397	2279	NA
8471	3152	3772	2869	2177	2568	2364	2301	NA
9359	2789	3304	2803	2204	2478	2335	2098	NA
8267	2959	3399	2134	2243	2468	2556	1877	NA
7410	3335	3732	2467	2165	2479	2818	1834	NA
6504	3259	3598	2888	2207	2417	2563	2225	NA
6345	3022	3183	3072	2321	2423	2359	2451	NA
4185	2705	2940	2925	2278	2358	2218	2616	NA
3424	2509	2669	2371	2128	2283	NA	2576	NA
3216	2382	2303	NA	2032	NA	NA	2258	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA

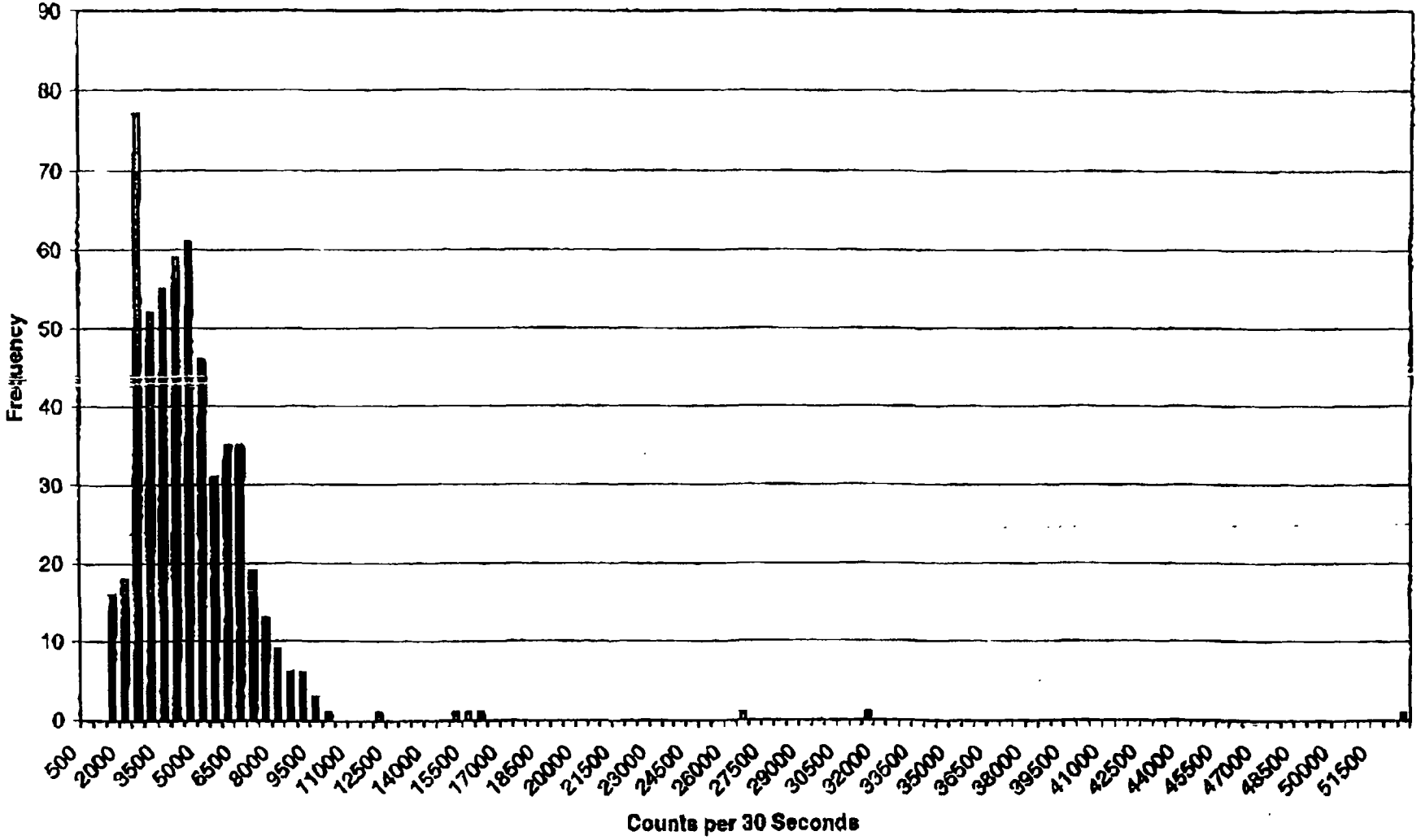
NA = Not Applicable

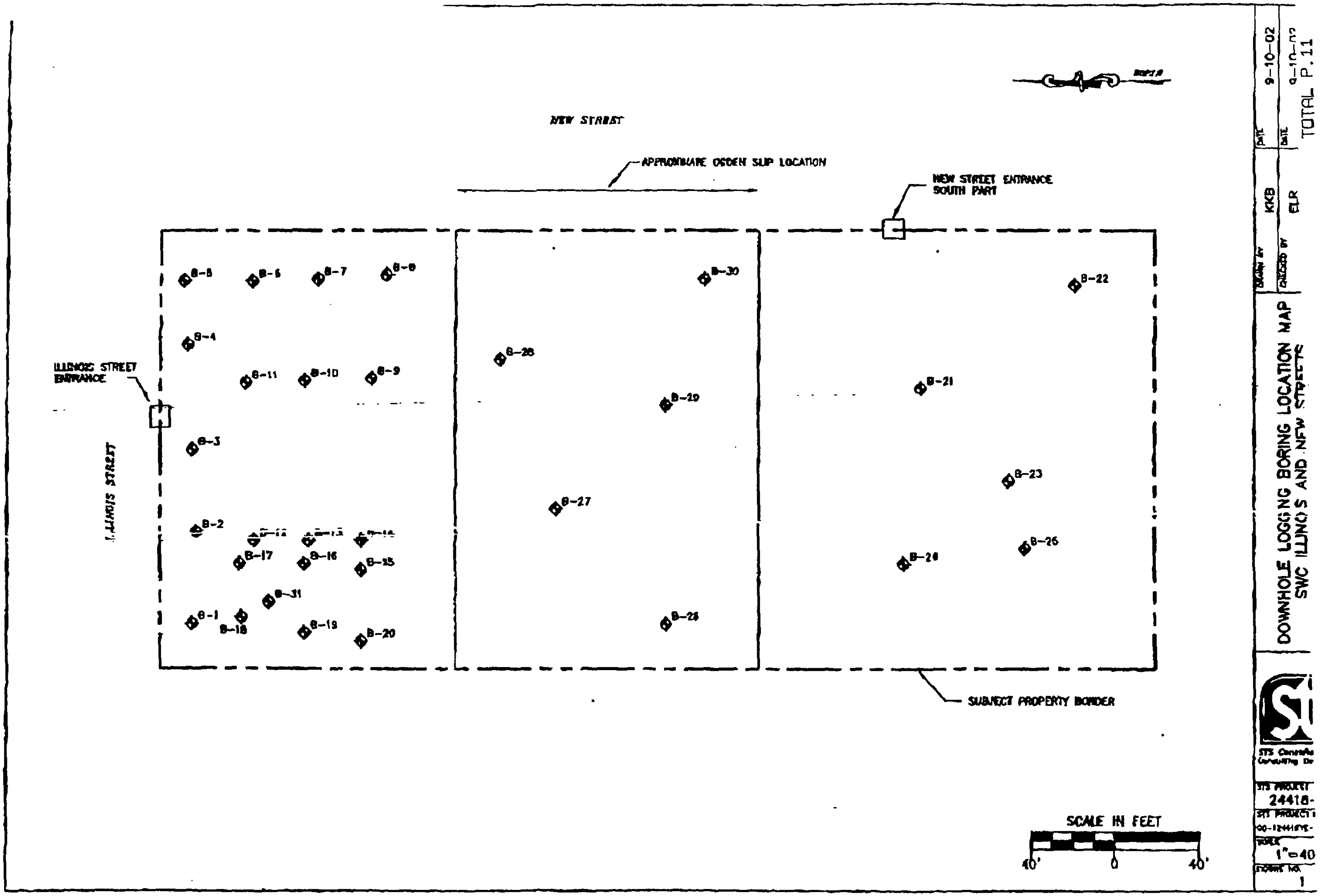
Attachment 1
Downhole Field Gamma Logs
B-1 thru B-31
(Counts per 30 Seconds)
September 10, 2002

B-27	B-28	B-29	B-30	B-31
3612	2821	1811	2139	2470
8297	4758	3197	4306	3140
15172	5498	3303	4761	3707
15800	5546	3913	3294	4134
14789	4963	3879	4278	5848
8153	3903	5627	7501	8780
11935	3852	7855	8426	9591
26114	3788	8585	8522	8080
52119	3397	8619	8628	5436
31228	3433	8586	9009	4791
NA	NA	NA	NA	6098
NA	NA	NA	NA	6871
NA	NA	NA	NA	7400
NA	NA	NA	NA	7590
NA	NA	NA	NA	7026
NA	NA	NA	NA	6916
NA	NA	NA	NA	6215
NA	NA	NA	NA	4975
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA

NA = Not Applicable

Attachment 2
Gamma Reading Frequency




NEW STREET
APPROXIMATE OGDEN SLIP LOCATION
NEW STREET ENTRANCE SOUTH PART
ILLINOIS STREET ENTRANCE
ILLINOIS STREET
B-1
B-2
B-3
B-4
B-5
B-6
B-7
B-8
B-9
B-10
B-11
B-15
B-16
B-17
B-18
B-19
B-20
B-21
B-22
B-23
B-24
B-26
B-27
B-28
B-29
B-30
B-31
SUBJECT PROPERTY BORDER
SCALE IN FEET
40'
0
40'
DOWNHOLE LOGGING BORING LOCATION MAP
SWC ILLINOIS AND NEW STREETS
DRAWN BY KKB DATE 9-10-02
CHECKED BY ELR
TOTAL P.11
STS PROJECT
24418-
1"=40
1